

Amendments to the Claims

1. (currently amended) A computer-implemented method for providing a recommendation list from a plurality of items, comprising the steps of:

receiving an adaptable constraint to apply during searches performed in response to recommendation requests, wherein the adaptable constraint includes a plurality of free variables ~~defined by a user~~;

receiving a recommendation request including a plurality of values defined by a user, for wherein the plurality of values includes at least one value for each of the plurality of free variables in the adaptable constraint;

binding the received values to the corresponding free ~~variable~~ variables to update the adaptable constraint ~~for future recommendation requests~~;

~~receiving a recommendation request identifying at least one of the free variables in the updated adaptable constraint;~~

performing a search of the plurality of items in response to the received recommendation request, wherein a set of search parameters is defined by the updated adaptable constraint, and wherein performing the search includes:

selecting the ones of the plurality of items that satisfy the updated adaptable constraint for the recommendation request, ~~[[;]]~~

computing a predicted value based on a recommendation filter, for each of the selected ones of the items, ~~[[;]]~~

appending the selected ones of the items meeting predetermined criteria to generate the recommendation list; and

transmitting the generated list ~~to the user~~ for presentation on a device.

2. (original) The method of claim 1, wherein appending selected ones of the items further includes appending the selected ones of the items to the recommendation list when the predicted value exceeds a predetermined number.

3. (original) The method of claim 1, wherein appending selected ones of the items further includes appending a predetermined number of items to the list.

4-5. (canceled).

6. (previously presented) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint including a Boolean expression.

7. (previously presented) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint includes an equality expression.

8. (previously presented) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint includes a category membership expression.

9. (original) The method of claim 1, wherein computing the predicted value further includes evaluating the selected ones of the items with collaborative filtering.

10. (previously presented) The method of claim 3, further comprising the step of:

truncating the recommendation list when the predetermined number of the selected ones of the items on the recommendation list has been met.

11. (canceled)

12. (previously presented) The method of claim 1, wherein specifying the adaptable constraint filter further includes:

obtaining a constraint; and
storing the constraint in memory.

13-15. (canceled)

16. (currently amended) An apparatus for providing a recommendation list from a plurality of items in a data processing system, comprising:

a processing component configured to process instructions for selecting items from the plurality of items, wherein the processing component includes:

a constraint filter including at least one constraint having a plurality of free variables ~~defined by a user~~, wherein ~~at least one~~ a value for each free variable ~~has a plurality of values~~ is defined by the user;

a recommendation filter; and

an order determination module configured to determine means for
~~determining~~ an order for invoking the constraint filter and the recommendation filter;

an input component configured to receive a recommendation request ~~identifying at least one of the~~ including a value defined by the user for each of the free variables in ~~[[a]]~~ the constraint;

a recommender component configured to perform a search in response to a received recommendation request, wherein a set of search parameters is defined by the constraint, and to generate a recommendation list based on the constraint filter and the recommendation filter; and

~~means for transmitting~~ an output component configured to transmit the generated list ~~to a user~~ for presentation on a device.

17. (previously presented) The apparatus of claim 16, wherein the processing component further includes means for computing predicted values based on the recommendation filter.

18. (currently amended) The apparatus of claim 16, wherein ~~means for determining an~~ the order determination module is further configured to determine for ~~invoking the constraint filter includes means for~~ the order of the filters to apply to the plurality of the items based on the cost of the filters; and

wherein the processing component ~~further includes:~~ is configured to apply ~~means for applying~~ the constraint filter first when it is determined that the cost of the constraint filter is lower than the cost of the recommendation filter, and ~~means for applying to apply~~ the recommendation filter first when it is determined that the cost of the recommendation filter is lower than the cost of the constraint filter.

19-20. (canceled)

21. (previously presented) The apparatus of claim 16, wherein the at least one constraint includes a boolean expression.

22. (previously presented) The apparatus of claim 16, wherein the at least one constraint includes a category membership expression.

23. (previously presented) The apparatus of claim 16, wherein the at least one constraint includes an equality expression.

24. (previously presented) The apparatus of claim 16, wherein the recommendation filter includes a collaborative filtering module that computes predicted values by evaluating ones of the plurality of items.

25. (original) The apparatus of claim 16, wherein the recommender component is further configured to truncate the recommendation list when a predetermined number of the ones of the items on the recommendation list has been met.

26. (previously presented) The apparatus of claim 16, further comprising an input component configured to:

obtain a constraint; and

store the constraint in a memory.

27. (canceled)

28. (previously presented) The apparatus of claim 16, wherein the processing component is further configured to adaptively specify the constraint filter, using a set of constraint-forming rules.

29. (currently amended) A computer-implemented method of generating recommendation lists from a plurality of items having assigned category memberships representing attributes of the items, comprising:

receiving a plurality of recommendation requests;

applying, during a search of the plurality of items performed for each recommendation request, a series of filters to each of the items, the series comprising a constraint filter and a recommendation filter for furnishing a predicted rating value, wherein the constraint filter is selected based on attributes associated with the recommendation request, wherein the constraint filter applies a constraint to the parameters of the search, the constraint having ~~has~~ a plurality of free variables ~~defined by a user~~, and ~~at least one~~ each free variable in the plurality of free variables has a value plurality of values defined by the user;

generating, for each recommendation request, a recommendation list based on the predicted rating value for the item that passes the constraint filter and the recommendation filter; and

for each recommendation request, transmitting the generated list to a user for presentation on a device.

30. (previously presented) The method of claim 29 further comprising:

building a constraint using constraint forming rules; and

incorporating the constraint into the constraint filter.

31. (previously presented) The method of claim 29 wherein the applying step comprises:

determining a lowest cost order of applying the constraint filter and the recommendation filter; and

applying the constraint filter and the recommendation filter in the lowest cost order.

32. (previously presented) The method of claim 31 wherein the order determining step comprises:

determining a cost for a first order, the first order being applying the constraint filter before applying the recommendation filter;

determining a cost for a second order, the second order being applying the recommendation filter before applying the constraint filter; and

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof.

33. (previously presented) The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on predicted rating values of the items that pass the constraint filter and the recommendation filter being in excess of a specified rating value.

34. (previously presented) The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations

based on a specified number of the items that pass the constraint filter and the recommendation filter with highest predicted rating values.

35. (canceled)

36. (previously presented) A method of generating a recommendation list from a plurality of items having assigned category memberships representing attributes of the items, comprising:

building a constraint using constraint forming rules, wherein the constraint includes a plurality of free variables ~~defined by a user~~;

receiving a recommendation request including a plurality of values defined by a user, for wherein the plurality of values includes at least one value for each of the plurality of free variables in the constraint;

binding the received values to the corresponding free ~~variable~~ variables to update the constraint ~~for future recommendation requests~~;

incorporating the constraint into a constraint filter;

~~receiving a recommendation request identifying at least one of the free variables in the adaptable constraint;~~

determining a cost for a first order, the first order being applying the constraint filter before applying the recommendation filter;

determining a cost for a second order, the second order being applying the recommendation filter before applying the constraint filter;

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof;

applying a series of filters to each of the plurality of items during a search performed in response to the recommendation request, the series comprising the recommendation filter and the updated constraint filter in the lowest cost order, wherein a set of parameters for the search is defined by the constraint;

generating a list of recommendations based on the predicted rating values for the items that pass the constraint filter and the recommendation filter; and transmitting the generated list to the user for presentation on a device.

37- 38. (canceled)

39. (new) The computer-implemented method of claim 1, wherein a free variable in the plurality of free variables for the adaptable constraint includes a set of possible values to be selected by the user.

40. (new) The computer-implemented method of claim 1, further comprising:
building a constraint to apply to recommendation requests using constraint forming rules, wherein the constraint includes a plurality of free variables.

41. (new) The method of claim 36, wherein a free variable in the plurality of free variables for the adaptable constraint includes a set of possible values to be selected by the user.

42. (new) A computer program product comprising a computer useable medium including control logic stored therein, the control logic enabling the generation of a recommendation list, by a method comprising:

receiving an adaptable constraint to apply during searches performed in response to recommendation requests, wherein the adaptable constraint includes a plurality of free variables;

receiving a recommendation request including a plurality of values defined by a user, wherein the plurality of values includes at least one value for each of the plurality of free variables in the adaptable constraint;

binding the received values to the corresponding free variables to update the adaptable constraint; and

searching the plurality of items in response to the received recommendation request, wherein a set of search parameters is defined by the updated adaptable constraint.

43. (new) The computer program product of claim 42, wherein the recommendation means further comprises:

selecting the ones of the plurality of items that satisfy the updated adaptable constraint for the recommendation request;

computing a predicted value based on a recommendation filter for each of the selected ones of the items; and

appending the selected ones of the items meeting predetermined criteria to generate the recommendation list.